DEPARTMENT of ENVIRONMENTAL SERVICES Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: BERRY POND	Lake Area (ha):	14.16
Town: PITTSFIELD	Maximum depth (m):	6.3
County: Merrimack	Mean depth (m):	3.3
River Basin: Merrimack	Volume (m³):	460500
Latitude: 43°16'47" N	Relative depth:	1.5
Longitude: 71°18'02" W	Shore configuration:	1.95
Elevation (ft): 886	Areal water load (m/yr)	: 4.15
Shore length (m): 2600	Flushing rate (yr ⁻¹):	1.30
Watershed area (ha): 116.5	P retention coeff.:	0.69
<pre>% watershed ponded: 0.0</pre>	Lake type: natura	l w/dam

BIOLOGICAL:	17 February 2000	23 June 1999
DOM. PHYTOPLANKTON (% TOTAL) #1	TABELLARIA 50%	UROGLENOPSIS 45%
#2	PERIDINIUM 48%	ANABAENA 12%
#3		TABELLARIA 8%
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		4.10
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 59%	VORTICELLA 24%
#2	NAUPLIUS LARVA 38%	NAUPLIUS LARVA 21%
#3		KERATELLA 19%
ROTIFERS/LITER	23	62
MICROCRUSTACEA/LITER	15	46
ZOOPLANKTON ABUNDANCE (#/L)	39	145
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		5.2
BOTTOM DISSOLVED OXYGEN (mg/L)	11.2	7.9
BACTERIA (E. coli, #/100 ml) #1		1
#2		1
#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m^3) : None Anoxic volume (m^3) : None

CHEMICAL: Lake: BERRY POND Town: PITTSFIELD					
	17 Febru	lary 2000	23 3	June 1999	
DEPTH (m)	2.0	4.0	2.0		5.0
pH (units)	5.9	5.9	6.4		6.3
A.N.C. (Alkalinity)	3.0	2.9	2.5		2.4
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	< 0.10	0.16	0.20		0.40
TOTAL PHOSPHORUS	0.009	0.009	0.005		0.009
CONDUCTIVITY (µmhos/cm)	28.8	28.8	26.8		26.3
APPARENT COLOR (cpu)	5	< 5	12		12
MAGNESIUM			0.57		
CALCIUM			1.7		
SODIUM			2.2	,	
POTASSIUM			0.44		
CHLORIDE	2	2	2		
SULFATE	5	5			
TN : TP		18	40		44
CALCITE SATURATION INDEX			4.3		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1999

D.O.	s.D.	PLANT	CHL	TOTAL	CLASS
**	1	1	1	3	Oligo.

COMMENTS:

- 1. This is the public water supply for the Town of Pittsfield. Access is a gated and locked access with no boat launch site. Swimming is prohibited.
- 2. This is a relatively clear water oligotrophic pond with low nutrient and ion levels. It has been treated in the past with copper sulfate to control taste and odor algae but not since 1992.
- 3. There is relatively new rip-rap on the face of the earthen dam and a new concrete spillway.

FIELD DATA SHEET

LAKE: BERRY POND TOWN: PITTSFIELD

DATE: 06/23/1999 WEATHER: sunny, hot, light breeze

DATE: 06/23/1999	WEATH	ek: sunny, not, 11	gnt breeze
DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	24.5	8.3	95 %
1.0	23.0	8.6	100 %
2.0	23.0	8.8	103 %
3.0	22.6	8.8	103 %
4.0	22.3	8.6	99 %
5.0	21.7	9.0	104 %
6.0	20.5	7.9	80 %
			

SECCHI DISK (m): 5.2 COMMENTS:

BOTTOM DEPTH (m): 6.3

TIME: 1123

*Dissolved oxygen values are in mg/L

AQUATIC PLANT SURVEY

LAKE: BERRY POND TOWN: PITTSFIELD DATE: 06/23/1999

			1111. 00, 23, 1333	
Vor	PLANT	ADIMOANCE		
Key	GENERIC	COMMON	ABUNDANCE	
G	Gramineae	Grass family	Sparse	
U	Utricularia	Bladderwort	Scattered	
S	Sparganium	Bur reed	Sparse	
d	Dulichium arundinaceum	Three-way sedge	Sparse	
Y	Nuphar	Yellow water lily	Sparse	
Х		Sterile thread-like leaf	Sparse	
A	Sagittaria	Arrowhead	Sparse	
. = .				
•				
			-	
	and an above the second			

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

- 1. Although the algal biomass was not abundant as evidenced by the chlorophyll concentration, algae were visible near the surface and *Anabaena circinalis* (a blue-green alga) was the second dominant net phytoplankton.
- 2. Plentiful bass and sunfish were observed.
- 3. Shoreline had lots of stumps and dead trees that had been cut and flooded over due to the dam.
- 4. Shoreline was wooded.